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ABSTRACT

Little research has focused on children's loneliness or on the relationships between children's loneliness and depression. Children are typically labeled as lonely by the external behaviors they may or may not exhibit, rather than by their perceptions of their social relationships. This study examined the Children's Loneliness Questionnaire (CLQ) for stability over time and construct-related evidence of validity. Children (n=279) in grades three through six, from two rural midwestern schools, completed both the CLQ and the Reynolds Child Depression Scale (RCDS) two times, 6 weeks apart. The 24-item CLQ consists of 16 primary items which focus on children's feelings of loneliness. The RCDS's 30 items describe each symptom of depression. Results indicate that the CLQ and RCDS are reliable sociometric measures for children over the age of 8. Large group administration procedures may have hindered younger children's responses on the CLQ. Concurrent-related evidence of validity of both instruments was reasonably high for children in grades four through six. For children in grades four through six, the test-retest reliability coefficients for the RCDS over a 6 to 7 week period was found to be lower than in previously reported research using shorter test-retest periods. (RJM)

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Reliability and Validity of the Children's Loneliness Questionnaire

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Abstract

Even though loneliness has been found to be a common and distressing problem for many Americans, little empirical research has been conducted (Weeks, Michela, Peplau, & Bragg, 1980). The present study investigated temporal stability and construct-related evidence of validity for the Children's Loneliness Questionnaire (CLQ). Children (n = 279) in grades three through six, from two rural midwestern schools completed the CLQ and the Reynolds Child Depression Scale (RCDS) two times six weeks apart. Pearson correlation coefficients indicated that the CLQ and RCDS are reliable sociometric measures for children over the age of eight. In addition, the CLQ and RCDS are moderately correlated. Implications for the continued use of the CLQ are discussed.

Reliability and Validity of the Children's Loneliness Questionnaire

Loneliness is an intense emotional condition which affects virtually all people from time to time in varying degrees (Booth, 1983). Throughout the last four decades, many definitions of adult loneliness have been suggested, establishing a general consensus among researchers that loneliness (a) results from perceived deficiencies in a person's social relationship, (b) is a subjective experience, not synonymous with social isolation, and (c) is an unpleasant and distressing experience (Peplau & Perlman, 1982). Even though loneliness has been found to be a common and distressing problem for many Americans, little empirical research on loneliness has been conducted (Weeks, Michela, Peplau, & Bragg, 1980). What is known focuses on the long-term effects of adult loneliness rather than children's loneliness.

Fromm (1947) suggested that if an individual's basic social emotional needs remained unfulfilled the person would either die or eventually become insane. Jones, Freemon, and Goswick (1981) showed high positive correlations between loneliness and alcoholism and suicide. They also found that lonely people suffered significantly lower self-esteem and were significantly more sensitive to rejection than non-lonely persons. Moreover, researchers have found positive correlations to exist between loneliness and anxiety (Weiss, 1973); hostility and passiveness (Sermat, Schmidt, & Wood,

1977); shyness (Pilkonis & Zimbardo, 1979); poor social skills and unrealistic social perceptions (Wittenberg & Reis, 1986); negative self-evaluation (Wilbert & Rupert, 1986); introversion and high sensitivity to rejection (Horowitz & French, 1979; Jones et al., 1981; Schmitt & Kurdek, 1985); increases in adolescent delinquency (Brennan & Austlander, 1979); poor self concept and self-criticism (Louks, 1980); boredom, restlessness, and unhappiness (Perlman, Gerson, & Spinner, 1978); and stress related illnesses and psychological disorders (Cohen & McKay, 1984; Mitchell, Billings, & Moos, 1983).

Because loneliness and depression often co-occur, sharing common characteristics such as general restlessness, self enclosure, and feelings of emptiness (Russell, Peplau, & Cutrona, 1980), their relationship has become increasingly more difficult to differentiate. Weiss (1973) and Weeks (1980) have written extensively about the relationship between loneliness and depression. Weiss (1973) takes a qualitative stance, suggesting that "in loneliness there is a drive to rid one's distress by integrating a new relationship; in depression there is instead a surrender to it" (p. 15). Numerous researchers have reported correlations between loneliness and depression ranging from .38 (Russell, Peplau, & Ferguson, 1978) to .71 (Young, 1982), strongly suggesting that these states often co-occur (Weeks et al., 1980). In addition, in persons suffering from loneliness and depression, "loneliness is positively correlated with negative feelings

and negative judgement or personality attributes and negatively correlated with socialization" (Weeks et al., 1980, p. 355). The major conclusion is that loneliness and depression are separate but often overlapping constructs which may contribute to each other.

Although studies have assessed the relationship between adult loneliness and depression, little research has focused on children's loneliness or on the relationship between children's loneliness and depression. Asher, Hymel, and Renshaw (1984) addressed this very issue and spoke of the need to continue to investigate children's emotional structures. In their 1984 study, Asher et al., developed a 24-item self report measure of children's loneliness and social dissatisfaction, the Children's Loneliness Questionnaire (CLQ). The CLQ was administered to 506 third through sixth grade children and was found to be internally reliable. Asher and his colleagues concluded that social dissatisfaction can be reliably measured and that children's feelings about their social relationships relate to their sociometric status in the classroom. Specifically, Asher et al., (1984) found that "lower status children do experience and report considerably more loneliness and social dissatisfaction than their more accepted peers" (p. 1460).

Children are typically identified as lonely by the external behaviors they may or may not exhibit, rather than their perceptions of their social relationships. Teachers, peers, or unfamiliar adult observers are standard

sources of this information. However, Asher et al., (1984) identified the need to supplement traditional assessment procedures with self-report measures that assess the level to which children themselves feel satisfied with their relationships. They found that "...assessment of children's own feelings about their peer relations were useful in identifying children for participation in intervention programs" (p.1461). Research also has shown that "there is a possibility that children's feelings of loneliness will predict later adjustment beyond the prediction that can now be made based on measures of children's participation in a social network" (Asher et al., 1984, p. 1463).

Since little is known about the affect and emotional structures of children's lives, loneliness in children merits investigation in it's own right (Asher et al., 1984). The present study investigated temporal stability and construct-related evidence of validity of the CLQ.

Method

Subjects

Children (N = 482) from 17 third through sixth grade classrooms in two rural, midwestern schools were asked to participate in the study. Of the original sample, 320 children (66%) consented to participate. Forty-one had incomplete data, leaving a total of 159 female and 120 male children (n = 279) in the final sample.

Instrumentation

The 24 item Children's Loneliness Questionnaire (CLQ) consists of 16 primary items which focus on children's feelings of loneliness (e.g., "I feel alone"), feelings of social adequacy (e.g., "I don't get along with other children"), or subjective estimations of peer status (e.g., "I am well-liked by the kids in my class") (Asher et al., 1984). The other eight items focus on children's hobbies or favored endeavors (e.g., "I like to read"; "I play sports a lot"). The CLQ response format consists of a five point Likert scale allowing the child to indicate how often each statement is a true description of him/herself (i.e., 1 = Always true, 2 = True most of the time, 3 = True sometimes, 4 = Hardly ever true, 5 = Not true at all).

Asher et al., (1984) subjected children's responses on the 24 questionnaire items to factor analysis. The results indicated a primary factor that included all 16 loneliness and social dissatisfaction items, while none of the interest items loaded significantly in the factor. The 16-item scale was found to be internally consistent (Cronbach's alpha = .90) and internally reliable (split-half correlation = .83; Spearman-Brown reliability coefficient = .91; Guttman split-half reliability coefficient = .91).

The Reynolds Child Depression Scale (RCDS) consists of 30 items describing each symptom of depression. Following the description, a Likert-type scale is used, allowing the child to indicate the frequency rating that best describes how often the child experienced the symptom over the

past two weeks (e.g., 1 = Almost never, 2 = Sometimes, 3 = A lot of the time, or 4 = All the time).

Breen (1987) tested 24 fifth-grade students from four elementary schools in the midwest and reported a test-retest reliability of .82 for the RCDS. Overall, he found a change in mean scores of approximately one point over a two-week period. Reynolds and Graves (in press) tested an ethnically diverse sample (50.9% female, 49.1% male, 24.1% White, 33.8% Black, 15.3% Asian, 19.0% Hispanic, and 7.9% other ethnic group membership) of 220 children from grades three through six from one school in a large metropolitan school district. Results from this investigation over a four week test-retest period revealed a relatively high test-retest reliability coefficient (r = .85). Overall, Reynolds and Grave (in press) found a change in mean scores of less than 2 points over a four-week period. Cronbach's internal consistency coefficients across the standardization sample (N = 1620, grades two through seven) were relatively high and ranged from .85 to .90 (Reynolds, 1989).

To support the construct validity of the RCDS, the manual reports correlations for several samples between the RCDS and the Children's Depression Inventory (CDI) (Kovacs, 1979, 1981, 1983) ranging from .68 to .79.

Procedure

After obtaining informed consent, children were randomly divided

into two groups. Trained research assistants administered the CLQ and RCDS to one group at a time using a set of standardized instructions. Children were trained in the use of each scale by responding to sample items. After the children demonstrated understanding of the task, the administrator read the items aloud, pausing for children to record their responses before proceeding to the next item. All subjects completed the surveys two times six weeks apart.

Results/Discussion

Pearson correlation coefficients for children in grades three through six were low to moderate (.45) on the CLQ and high (.71) on the RCDS. Due to the lower reliability of the CLQ, validity coefficients were not examined for the group, but were examined at each grade level.

Insert Table 1 about here

Table 1 presents Pearson correlation coefficients of the CLQ and RCDS across administrations grade by grade. Test-retest reliability of the CLQ for grade three ($\underline{n}$ = 81) was low (.29), and the test re-test reliability of the RCDS remained high (.72). Due to significant measurement error, results of the CLQ were not considered to be valid for children in the third grade.

Two explanations are offered for the lack of evidence of reliability

and validity at this grade level. First, it is possible that the large group administration had a detrimental influence on the test behavior of the younger children, and therefore it may not constitute best practice. Even though the questions were read out-loud by a trained administrator, the large number of older children in the room, speed of administration, and lack of individualized attention may have negatively affected the reliability of the younger children's responses. Secondly, the CLQ may not be able to reliably assess loneliness in young children.

Table 1 presents Pearson correlation coefficients for the CLQ and RCDS for children in the fourth grade ($\underline{n}$ = 94). It can be seen that the test-retest reliability of the CLQ (.64) and the RCDS (.65) was moderate. Concurrent-related evidence of validity was examined by correlating the scores on the CLQ and RCDS from the first administration and then correlating the scores on the second administration. Results indicated a moderate correlation for the first administration (.57) and a high correlation for the second administration (.75). The moderate to high correlation between the CLQ and RCDS indicated that either the questionnaires were measuring the same construct, or the states of loneliness and depression co-occurred at a moderate to high level.

Since moderate reliability coefficients were noted for both instruments and a significant difference between validity coefficients from the first to second administration was noted, a reasonable hypothesis can

be offered suggesting that the instruments are measuring separate constructs which were co-existing at a moderate level at the time of the first administration and a high level at the time of the second administration. The co-existence theory is supported and consistent with prior research by Weeks et al. (1980). Structural equation analysis (SEQ) should be conducted to test this hypothesis.

Pearson correlation coefficients of the CLQ and RCDS across administrations for children in the fifth grade ($\underline{n}$ = 76) are presented in Table 1. It can be seen that the test-retest reliability of the CLQ (.65) was moderate, and the test-retest reliability of the RCDS was high (.75).

Concurrent-related evidence of validity was examined as for the fourth graders. Results indicated a high correlation for the first administration (.77) and a moderate correlation for the second administration (.69). Once again, the results suggested that either the instruments were measuring the same construct, or the constructs were co-occurring at a reasonably high rate.

Children in the sixth grade ($\underline{n}$ = 28) had test-retest reliabilities of .88 on the CLQ and .81 on the RCDS (see Table 1). This suggests that the CLQ and RCDS reliably measure a construct at a high degree over time for children at this age level. Concurrent-related evidence of validity was examined by correlating the scores on the CLQ and RCDS from the first and second administrations. Results indicated a high correlation for the

first administration (.70) and a low correlation for the second administration (.40). Considering the high reliability coefficients at this grade level, these results seem to suggest that the instruments measure separate constructs which were co-occurring at the time of the first administration and not the second. If these instruments were measuring the same constructs, one would expect the concurrent validity coefficients to remain generally stable over time. Once again, SEQ would be helpful in confirming this hypothesis.

Due to the low reliab ty of scores for children in the third grade, test- retest and concurrent validity coefficients were calculated using only the scores for grades four through six. Table 1 presents Pearson correlation coefficients for the CLQ and RCDS across administrations for grades four through six (n = 198). It can be seen that the test-retest reliability of the CLQ (.67) and the RCDS (.70) were comparable. The results suggest that both instruments provide reliable results in a large group administration for children at these age levels.

Concurrent-related evidence of validity was examined by correlating the scores on the CLQ and RCDS from the first and second administrations. Results indicated a moderate correlation between the CLQ and the RCDS for both administrations .64 and .68, respectively. The results also suggest that either the instruments were measuring the same construct, or the constructs were co-occurring at a reasonably high rate.

Conclusion

In summary, the results from this study indicated that the CLQ and RCDS are reliable sociometric measures for children over the age of eight. Large group administration procedures may have hindered younger children's responses on the CLQ. Future researchers investigating age appropriateness may wish to administer the CLQ individually or in small groups to younger children.

Secondly, results indicated concurrent-related evidence of validity of both instruments was reasonably high for children in grades four through six. The CLQ appeared to be either measuring the same construct (depression) as the RCDS or a separate construct which was co-occurring at a reasonably high rate. Changes in validity coefficients from the first to the second administration would suggest that the instruments are measuring separate constructs. However, this hypothesis can not be confirmed from the analyses conducted in this study.

Lastly, the present study enhances what is known about the test-retest reliability of the RCDS. The RCDS manual (1989) reported test-retest reliability coefficients of .82 over a two-week period for children in grades three though six (Breen, 1987) and .85 over a four-week period (Reynolds & Graves, in press) for children in the fifth grade. In the present study, the test-retest reliability coefficients over a six to seven week period for children in grades four through six was lower (.70).

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Table 1

Pearson Correlation Matrix Across Administrations for the CLQ and RCDS

	Time 1		Time 2
	CLQ	RCDS	RCDS
Time 1		Grade 4 (n = 94)	
CLQ	1.00	.57	.57
RCDS	.57	1.00	.65
Time 2			
CLQ	.64	.59	.75
Time 1		Grade 5 (n = 76)	
CLQ	1.00	.77	.68
RCDS	.77	1.00	.75
Time 2			
CLQ	.65	.52	.69
Time 1		Grade 6 (n = 28)	
CLQ	1.00	.70	.49
RCDS	.70	1.00	.81
TIME 2			
CLQ	.88	.68	.40

Table 1 (con't)

Pearson Correlation Matrix Across Administrations for the CLQ and RCDS

	Time 1		Time 2
	CLQ	RCDS	RCDS
Time 1		Grades 4-6 (n = 198)	
CLQ	1.00	.64	.59
RCDS	.64	1.00	.70
Time 2			
CLQ	.67	.56	.67